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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/852,028	05/10/2001	Surender V. Brahmaroutu	219.39661X00	4632

7590

05/15/2006

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EXAMINER

SWEARINGEN, JEFFREY R

ART UNIT

PAPER NUMBER

2145

DATE MAILED: 05/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/852,028	<b>Applicant(s)</b> BRAHMAROUTU, SURENDER V.	
	<b>Examiner</b> Jeffrey R. Swearingen	<b>Art Unit</b> 2145	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11-18 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 6-9, 19 and 23-25 is/are rejected.
- 7) ☒ Claim(s) 3-5, 10, 21 and 22 is/are objected to.
- 8) ☒ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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#### **DETAILED ACTION**

1. This application has been reassigned to a new Examiner.

#### ***Response to Arguments***

2. This action is non-final in order to address the deficiencies found by Applicant in the previous examiner's office action of 8/8/2005.
3. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Allowable Subject Matter***

4. Claims 11-18 are allowed.
5. Claims 3-5, 10, and 21-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
6. Claims 10 and 18 are allowable subject matter because the three pages of claim language in each of these claims is distinguished over the prior art. The other objected claims are allowable because all relevant prior art discovered using the LIDs belonged to Intel, and would be ineligible for a rejection under 35 U.S.C. 103(c). Relevant prior art discovered using LIDs belonging to Intel did not fulfill the claim language as required under 35 U.S.C. 102.

#### ***Claim Objections***

7. Claim 2 is objected to because of the following informalities: "multiple" has been misspelled "mutiple". Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-2, 6-9, 19, and 23-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Dobbins et al. (US 5,485,455).

10. In regard to claims 1 and 19, Dobbins disclosed

*determining all possible links between all ports on the subnet during topology discovery (column 14, lines 6-16);*

*creating an all port connectivity table which records all port-to-port connectivity information (column 8, lines 6-21; column 11, lines 54-63);*

*creating an all switch shortest paths table which records all the shortest paths between every switch pair on the subnet based on the port-to-port connectivity information (column 19, line 35 – column 20, line 67); and*

*computing forwarding tables for respective switches on the subnet that allow usage of multiple paths between switch pairs based on the port-to-port connectivity information and based on the shortest paths between every switch pair (column 21, lines 32-47).*

11. In regard to claims 2 and 20, Dobbins disclosed

*downloading the forwarding tables to respective switches on the subnet that allow usage of multiple paths between switch pairs (column 8, lines 6-12); and*

*enabling respective switches on the subnet to route data packets from the host system to the target system via multiple paths through the switched fabric (column 8, lines 6-12).*

12. In regard to claims 6 and 23, Dobbins disclosed

*said forwarding tables are computed based on the principle that only the shortest path between a given switch pair is guaranteed to overlap with other shortest paths that either originate from or destined*

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*to some intermediate port that exists on the shortest path between the original switch pair (column 20, lines 37-48).*

13. In regard to claims 7, 9 and 24, Dobbins disclosed

*determining a destination switch to which a destination port is directly connected (column 16, lines 12-19);*

*identifying all the links that exist between the destination switch and other switches in the subnet (column 16, lines 12-19);*

*sorting all the links by respective originating port number in an ascending order (This function is inherent to the database of column 16, lines 43-48. It is well known in the art that databases can sort based on any number of criteria, including ascending or descending order. Looking up the data would require sorting the links.);*

*picking an appropriate link and identifying the switch to which the link is connected at the other end (column 16, lines 43-65);*

*determining the best route between the switch identified and the switch for which the forwarding table is being constructed (column 19, line 35 – column 20, line 67); and*

*inputting associated outport number at a designated location in the forwarding table (column 20, lines 34-36; column 21, line 50 – column 23, line 26) .*

14. In regard to claims 8 and 25, Dobbins disclosed

*said shortest paths between every switch pair are computed utilizing an All Paths Shortest Paths (APSP) algorithm, and each shortest path from the source to the destination switch is represented by a <Port, Cost> duple in which the port is the port number of the source switch where the path originates and cost is the path cost metric that is computed based on a hop count, a message transfer (MTU) size, a link speed, width and other port and link characteristics. (column 20, lines 25-64)*

### **Conclusion**

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15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
16. Matthews US 5,521,910
17. Dobbins et al. US 5,825,772
18. Schroeder et al. US 5,088,091
19. Lamport et al. US 5,138,615
20. Rodeheffer, Thomas L. et al. "SmartBridge : A Scalable Bridge Architecture". Proceedings of the Conference on Applications, Technologies, Architectures, and Protocols for Computer Communication. ACM Press. Stockholm, Sweden. 2000. pp. 205-16.
21. Narvaez, Paolo et al. "New Dynamic Algorithms for Shortest Path Tree Computation". IEEE/ACM Transactions on Networking (TON). IEEE Press. December 2000. Vol 8, Issue 6, pp. 734-46.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey R. Swearingen whose telephone number is (571) 272-3921. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Cardone can be reached on 571-272-3933. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Jason Cardone  
Supervisory Patent Examiner  
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